

# PROGRESS CHECK 1

1. What number comes next in the pattern?

36, 31, 26, 21, ...

- A 20
- B 18
- C 17
- D 16

2. What is the missing number in the pattern?

1, 2, 4, 8, , 32, 64, ...

- A 12
- B 14
- C 16
- D 18

3. What is the value of  $10n$  when  $n = 20$ ?

- A 30
- B 200
- C 1,020
- D 2,000

4. Solve  $x + 13 = 21$  for  $x$ .

- A  $x = 8$
- B  $x = 12$
- C  $x = 18$
- D  $x = 31$

5. What is the rule for the values in this table?

$x$	$y$
1	5
2	6
3	7
4	8

- A  $y = x + 4$
- B  $y = x - 4$
- C  $y = 5x$
- D  $x = 5y$

6. Which symbol means *is less than or equal to*?

- A  $>$
- B  $\geq$
- C  $<$
- D  $\leq$

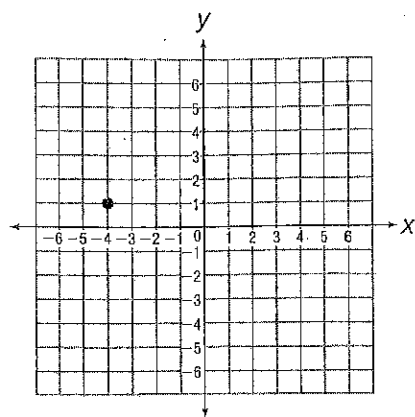
7. A school will be using vans to transport band members to a competition. Each van can hold eight passengers. How many vans are needed to hold 88 passengers?

- A 10
- B 11
- C 12
- D 13

8. What is the value of the expression  $2m - 7$  when  $m = 10$ ?

- A 5
- B 6
- C 13
- D 27

9. Which ordered pair is graphed below?



- A  $(-4, -1)$       C  $(-1, 4)$   
 B  $(-4, 1)$       D  $(1, -4)$

10. Which table shows only pairs of values that match the equation  $y = x - 5$ ?

A

$x$	1	2	3	4
$y$	6	7	5	9

B

$x$	5	6	7	8
$y$	1	2	3	4

C

$x$	5	6	7	8
$y$	0	1	2	3

D

$x$	5	10	15	20
$y$	1	2	3	4

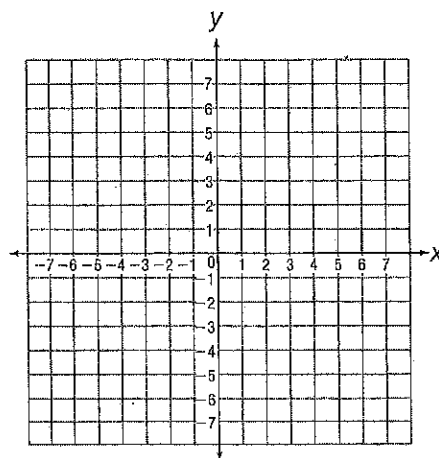
11. Use the linear equation  $y = x - 3$  for this question.

A. The point  $(7, 4)$  lies on the graph of  $y = x - 3$ . Explain how you know that is true.

B. Explain how to graph the point  $(7, 4)$ .

C. Graph the equation. List the ordered pairs you used in the table.

$x$	$y$
7	4



# PROGRESS CHECK 2

1. What number comes next in the sequence?

2, 6, 18, 54, ...

- A 58                      C 152  
B 90                        D 162

2. Which of the following could be the rule for the values in this table?

x	y
1	9
2	18
3	27
4	36

- A  $y = \frac{x}{9}$   
B  $y = 9x$   
C  $y = x + 8$   
D  $y = x + 9$

3. What is the missing number in the pattern?

1, 3, 6, 10,   , 21, 28, 36, ...

- A 14                      C 16  
B 15                      D 17

4. What is the value of  $\frac{m}{2}$  when  $m = 12$ ?

- A 6                        C 14  
B 10                      D 24

5. What is the solution for this equation?

$$3a + 12 = 27$$

- A  $a = 5$   
B  $a = 13$   
C  $a = 45$   
D  $a = 117$

6. Which shows all the solutions for this inequality?

$$3x \geq 12$$

- A  $x \geq 36$                       C  $x \geq 4$   
B  $x \geq 9$                         D  $x \geq \frac{1}{4}$

7. Which ordered pair makes the equation  $y = 2x - 1$  true?

- A (1, 20)                      C (5, 3)  
B (3, 4)                        D (6, 11)

8. A 60-pound printer and 8 boxes were loaded on an elevator. The boxes weigh  $p$  pounds each. The total load was more than 300 pounds. Which inequality matches this situation?

- A  $68p > 300$   
B  $68p < 300$   
C  $60 + 8p > 300$   
D  $60 + 8p < 300$

9. What is the value of  $1.5g + 0.5$  when  $g = 12$ ?

- A 14                      C 18.5  
B 17.5                    D 18.75

10. What is the solution for this equation?

$$y + \frac{1}{2} = 9$$

- A  $y = \frac{7}{2}$                       C  $y = 9\frac{1}{2}$   
B  $y = 8\frac{1}{2}$                     D  $y = 18$

11. Which table shows only pairs of values that match the equation  $y = 4x + 3$ ?

A

x	1	2	3	4
y	16	20	24	28

B

x	1	2	3	4
y	11	12	13	14

C

x	1	2	3	4
y	44	45	46	47

D

x	1	2	3	4
y	7	11	15	19

12. Use this linear equation:

$$y = 2x + 2$$

A. Explain what it means for an equation, like the one above, to be linear.

B. Graph the equation. List the ordered pairs you used in the table.

x	y

